201-15119

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February 12, 2004

Marianne Lamont Horinko, Administrator
U.S. Environmental Protection Agency
P.O. Box 1473
Merrifield, VA 2216

Attn: Chemical Right-to-Know Program

Re: EPA comments on the Test Plan and Robust Data Summary for Mononitrile Category

Dear Administrator Horinko,

E. I. du Pont de Nemours & Company, Inc. received EPA's comments on the test plan and robust data summary for the Mononitrile Category and is pleased to respond. We have considered the recommended revisions to physiochemical data, environmental fate, eco-toxicity, and health effects. We have revised our submittal as needed on the attached summary sheet. Also included with this submittal is a revised robust data summary.

Please feel free to contact me with any questions or concerns you may have with regards to this submission at Edwin.L.Mongan-1@usa.dupont.com or by phone at 302-773-0910.

Sincerely,

Edwin L. Mongan, III
Manager, Environmental Stewardship
DuPont Safety, Health & Environment

Cc: Charles Auer – U.S. EPA
Office of Pollution Prevention & Toxics
U. S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Mononitrile Category: Response to EPA Comments

Physiochemical Data

EPA comment: *Melting Point*: The submitter provided only estimated data for this endpoint. According to OECD TG102, measured data are not necessary if a chemical/s melting point is <0°C. EPA identified analog chemical, which suggests that estimated data are adequate. Submitter needs to add a rationale of this nature, with appropriate analog data, to the test plan and robust summaries.

Response: Rationale and additional analog data were added.

EPA comment: *Vapor pressure*: The submitter provided only estimated vapor pressure values that, according to OECD guidelines, are adequate only if they are <10-5 Pa. Since all of the values are above this threshold, the submitter needs to conduct vapor pressure studies on 2-methyl-3-butenenitrile, 4-pentenenitrile, and either 2-pentenenitrile or 3-pentenenitrile.

Response: The test plan has been updated to include vapor pressure studies for 2-methyl-3-butenenitrile and 2-pentenenitrile. Since 4-pentenenitrile is an impurity and there is little potential for exposure, vapor pressure will not be tested.

Environmental Fate (photodegradation, stability in water, biodegradation, fugacity).

EPA comment: *Photodegradation*: Indirect photolysis data are adequate, but the submitter needs to add the information to Table 3 of the test plan.

Response: Requested data were added to the test plan.

EPA comment: *Photodegradation*: The submitter needs to provide a robust summary of the AOPWIN model results, including input parameters and a discussion as to whether mononitriles absorb sunlight at >290 nm.

Response: Data have been added to the robust summaries.

EPA comment: Fugacity: The submitter needs to provide a robust summary of fugacity modeling results, including input parameters.

Response: Data have been added to the robust summaries.

Ecotoxicity (fish, invertebrates, and algae)

EPA comment: Acute toxicity test data on 2-methyl-3-butenenitrile, 2-pentenenitrile, and 3-pentenenitrile are inadequate because nominal concentrations were used for volatile chemicals that require closed test systems and measured concentrations. Furthermore, as stated under Category Justification, EPA considers that the allylic and vinylic cyanides

cannot be evaluated according to a simple narcosis model or likened to each other or to 4-pentenenitrile. EPA therefore recommends that the full set of acute toxicity tests be performed with 2-pentenenitrile and 3-pentenenitrile according to OECD Guidelines 201-203. The test results for 3-pentenenitrile can be extrapolated to 2-methyl-3-butenenitrile. The ECOSAR estimates for 4-pentenenitrile are acceptable provided they are supported by measured data on a satisfactory (non-vinyl, non-allyl) unsaturated or saturated analog.

Response: Additional measured data, as well as ECOSAR values, were added to the robust summaries. Based on these data, the physical-chemical characteristics of the compounds, and the limited potential for meaningful aquatic exposures, no additional testing is recommended for these substances. Additionally, since 4-pentenenitrile is an impurity that is not an HPV chemical for DuPont, and since there is very little potential for exposure, no additional testing is recommended for aquatic endpoints.

Health Effects

EPA Comment: Robust summaries of bacterial mutagenicity assays on 2-methyl-3-butenenitrile, 2-pentenenitrile, and 3-pentenenitrile omitted the cytotoxic concentrations.

Response: Where available, data were added to the robust summaries.